

THE MINERAL INDUSTRY OF ARMENIA

By Richard M. Levine

Armenia's mineral industry in recent years was primarily involved in mining nonferrous and industrial minerals. Armenia has large molybdenum reserves and was mining one-third of the former Soviet Union's (FSU) output of molybdenum. The molybdenum was associated with copper. Armenia also mined copper-zinc deposits. It has a native gold mining industry and its nonferrous ore byproducts include barite, gold, lead, rhenium, selenium, silver, tellurium, and zinc.

The nation has a large industrial minerals industry and was the largest producer of perlite in the FSU. It produced a number of other industrial minerals, including clays, diatomite, dimension stones, limestone, salt, and semiprecious stones, and has a diamond cutting plant. Armenia, reportedly, also has significant high quality iron ore reserves, which have not yet been exploited. However, Armenia had practically no mineral fuel production in 1995 and was dependent on imported mineral fuels.

In 1995, Armenia was making the effort to attract investment in its mineral industry. It held an open tender that closed October 10, 1995, for the right to mine 33 deposits including gold; ferrous and nonferrous metals; perlite; semiprecious, decorative, and facing stones; tuffs; and zeolite.

One of Armenia's major problems has been the lack of discovery of any significant oil and gas reserves. There are some indications that Armenia could have significant oil and natural gas reserves at a depth of 10 kilometers (km), but current exploration reportedly has been conducted to a depth of only 5 km. In 1995, efforts were underway to explore for and assess coal resources as a potential domestic fuel source. Some new coal deposits have been discovered and the U.S. Geological Survey (USGS) under an agreement with the U.S. Agency for International Development (USAID) was assisting Armenia in the exploration and assessment of coal resources. The USGS is to supply Armenia with geophysical and drilling equipment, establish laboratories in Armenia for coal quality analysis and assessment, and train Armenian specialists at USGS centers and in Armenia.

In 1995, Armenia for the first time reported positive growth indicators for all major economic indices. In comparison with 1994 the gross domestic product (GDP) rose 6.9%, national income rose 5.8%, and industrial production rose 3.4%.

In 1995, Armenia reported a 66% increase in output in its mining and metallurgy sector compared with 1994, experiencing a reversal in the situation in which production of all mineral commodities in Armenia had fallen sharply since the breakup of the Soviet Union. The economic disruptions caused by the dissolution of the FSU had been exacerbated in Armenia because of blockades and disruptions in supplies because of the warfare and tensions in neighboring Azerbaijan in and around the predominately Armenian region of Nargorno Karabakh, political and military disturbances in neighboring and nearby regions of Georgia and the North Caucasus, and difficulties for Armenia establishing beneficial economic and political relations with neighboring Turkey. Problems with Turkey were due in part to Armenia's tensions with Azerbaijan over Nagorno Karabakh. The increase in mineral output in 1995 was attributed in part to Armenia's mining and metallurgical enterprises receiving needed chemicals to produce copper and molybdenum concentrates from the neighboring State of Iran. In exchange, the Armenian concentrates were sent to Iran for processing.

Plans for 1996 called for increasing capacity at the Yerevan aluminum plant that produces rolled aluminum and aluminum foil, beginning design work for a rebuilding a copper smelter in Alaverdy, and beginning construction of a gold refinery in Yerevan.

Besides mining copper, Armenia had a large copper smelter at Alaverdy with a 50,000 metric tons per year (t/yr) capacity that was closed in the late 1980's for environmental reasons. Plans now call for reopening a smelter in Alaverdy and building a new smelter with a 25,000 t/yr to 30,000 t/yr capacity in the Zangezur mining region. Both smelters would be supplied from domestic deposits.

Armenia's state diamond cutting company, Shogakn, with a diamond-cutting plant in Nor Achin utilizing both gem and industrial diamonds imported from Russia and also made diamond jewelry. In 1995, Shogakn reportedly had a supply quota set by Russia of 64,500 carats of rough gem diamonds and 600 carats of polished diamonds. The diamonds imported from Russia by agreement must be processed by Shogakn.

In 1995, gold production in Armenia was only about 100 kilograms which was a significant decrease from the 2 metric tons (t) that Armenia produced in 1991. Armenia has

explored four gold lode deposits, but only one, the Zod deposit 150 km east of Yerevan, was being exploited. About one-third of Armenia's gold production had come from processing of polymetallic base metal ores. Zod ores were sent to the Ararat plant 60 km from Yerevan for processing. Armenia's state-owned gold mining concern Armzoloto was engaged in discussions with potential foreign partners to develop Armenia's 1996 budget called for increased exploration of gold deposits, particularly the Lusadzor and Megradzor lode deposits, and completing exploration of the polymetallic Shaumyan deposit containing cadmium, copper, gold, and silver.

Despite Armenia's sizable molybdenum and copper reserves, foreign investors have shown the greatest interest in gold development. This situation could change as Armenia achieves greater stability in its relations with neighboring States and continues to stabilize its economy. Armenia may then be able to attract greater interest in investment in its base metals and industrial minerals.

OTHER SOURCES OF INFORMATION

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TABLE 1
ARMENIA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1995

(Metric tons unless otherwise specified)

Commodity	Major operating facilities	Location of main facilities	Annual capacity e/
Copper, Cu content of ore	Kafan copper mining directorate	Kafan	10,000,000 1/
Do.	Shamlug mining directorate	Shamlug	
Do.	Akhtala mining directorate	Akhtala	
Do.	Zangezur copper-molybdenum complex mining Kadzharan deposit	Kadzharan	
Do.	Agarak copper-molybdenum mining and processing complex	Agarak	
Gold	Zod mining complex	Zod	2 2/
Do.	Megradozor deposit	Megradozor	
Molybdenum (Mo content of ore)	Zangezur copper-molybdenum complex mines Kadzharan deposit	Kadzharan	5,000 2/
Do.	Agarak copper-molybdenum mining complex	Agarak	
Perlite	Aragats mining and beneficiation complex	Aragats	200,000

e/ Estimated

1/ Copper content of ore total from all enterprises.

2/ Total for both enterprises.